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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,384	11/09/2001	Christopher J. Conway	9858-000037	1096

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EXAMINER	
MCCAMEY, ANN M	
ART UNIT	PAPER NUMBER
2833	

DATE MAILED: 04/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/014,384	CONWAY ET AL.	
	Examiner	Art Unit	
	Ann M McCamey	2833	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-13,15-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

The drawings are objected to because it is unclear from Figure 3 where the housing ends and the pin begins particularly around feature 20. It appears that there are several lines missing in the figure. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 1 is objected to because of the following informalities: "pin shoulder" (line 10 should be –the pin shoulder--.

Claim 2 is objected to because of the following informalities: "the shoulder" requires proper antecedent basis since there are two shoulders recited in claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27-32 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The scopes of the above-mentioned claims are indefinite because there is an inconsistency between the body and the preamble. The preamble indicates that one of a pin or housing is being claimed. However, the body contains positive limitations directed toward the other suggesting that applicant intends to claim the combination of the pin and the housing. Applicant is required to clarify what subject matter the claim is intended to be drawn to and the language of the claim must be amended to be consistent with this intent.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 27, 29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark (US 3,727,172).

Regarding claims 27, 29 and 30, Clark discloses a housing (Fig. 18) comprising:

a hollow internal channel comprising a shoulder (on feature 14); and

at least one locking finger 42 disposed within the hollow internal channel and disposed distally from the shoulder.

Claim 32 is rejected under 35 U.S.C. 102(b) as being anticipated by Clark et al. (US 5,820,409).

Regarding claim 32, Clark et al. disclose a pin comprising:

a first collar 22 comprising a shoulder (left of 22); and

a second collar 27 disposed proximally from the first collar.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark in view of Eifler (US 4,406,507).

Regarding claim 28, Clark discloses the invention substantially as claimed, but does not disclose eight locking fingers evenly spaced around the hollow internal channel. Eifler teaches six fingers, and discloses, "more or less than the number of fingers **14** as shown may be used" (column 3, lines 26-27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the housing of Clark with eight, evenly spaced, locking fingers as Eifler teaches to center the pin with respect to the channel.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark.

Regarding claim 31, Clark discloses the invention substantially as claimed, but do not disclose the housing and the locking finger comprising a fiber-reinforced nylon material. It would have been obvious to one having ordinary skill in the art at the time

the invention was made to choose a fiber-reinforced nylon material for the housing and locking finger, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin,* 125 USPQ 416.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al.

Regarding claim 34, Clark et al. disclose the invention substantially as claimed, but do not disclose the pin comprising brass. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose brass for the pin, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin,* 125 USPQ 416.

Claims 1-4, 7, 9, 17-19 and 35-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (US 5,820,409) in view of Clark (US 3,727,172).

Regarding claims 1, 39, 40 and 41 Clark et al. disclose (Fig. 12) the invention substantially as claimed including a connector for use in a plasma arc apparatus comprising:

a housing 24 defining a hollow internal channel;

at least one locking finger 31 (sloping inwardly and distally) disposed within the hollow internal channel; and

a pin 17 comprising:

a first collar 22 with a shoulder (left of 22) disposed thereon; and

a second collar 27 disposed proximally from the first collar,

wherein the locking finger engages the pin shoulder to prevent movement of the pin in a proximal direction.

Clark et al. fail to disclose the channel comprising a shoulder that engages the second collar of the pin. Clark teach a shoulder (Fig. 18 on feature 14) that engages with a second collar of a pin. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a shoulder to the channel of the housing to secure the pin in the housing without the need for mechanical fasteners.

Regarding claim 2, Clark et al. disclose the pin further comprises a tapered portion (right of 22) such that the shoulder is disposed between the first collar and the tapered portion.

Regarding claim 3, Clark et al. disclose the locking finger is integrally formed within the hollow internal channel.

Regarding claim 7, Clark et al. disclose the pin is recessed within a second portion of the hollow internal channel.

Regarding claim 17, Clark et al. disclose the invention substantially as claimed including a connector comprising:

a housing 24 defining a hollow internal channel, the hollow internal channel comprising a first portion and a second portion;

at least one locking finger 31 disposed within the hollow internal channel; a pin defining a first collar 22 with a shoulder (left of 22) disposed thereon;

and a second collar 27 disposed proximally from the first collar, wherein the second collar slidably blocks access to the locking finger through the first portion of the hollow internal channel, the pin is recessed within the second portion of the hollow internal channel, and the locking finger engages the pin shoulder to prevent movement of the pin in a proximal direction.

Clark et al. fail to disclose the channel comprising a shoulder that engages the second collar of the pin. Clark teach a shoulder (Fig. 18 on feature 14) that engages with a second collar of a pin. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a shoulder to the channel of the housing to secure the pin in the housing without the need for mechanical fasteners.

Regarding claim 18, Clark et al. disclose the locking finger is integrally formed within the hollow internal channel.

Regarding claim 35, Clark et al. disclose in a connector for making a connection in a plasma arc apparatus to provide fluid and electric power, the connector having a housing 24 mounting a pin 17 for conducting fluid and electric power, the improvement comprising:

a tamper resistant connection between the housing and the pin comprising:

a first collar 22 disposed on the pin;

a second collar 27 disposed proximally from the first collar; and

a hollow internal channel within the housing to receive the pin, the hollow internal channel comprising a plurality of locking fingers wherein the locking fingers engage the first collar to secure the pin in a proximal direction.

Clark et al. fail to disclose the channel comprising a shoulder that engages the second collar of the pin. Clark teach a shoulder (Fig. 18 on feature 14) that engages with a second collar of a pin. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a shoulder to the channel of the housing to secure the pin in the housing without the need for mechanical fasteners.

Regarding claim 36, Clark et al. disclose at least a portion of the pin proximal to the fingers is sized to closely conform to the hollow internal channel, to restrict access to the locking fingers.

Regarding claim 37, Clark et al. disclose the locking fingers slope inwardly and distally, and wherein the shoulder faces proximally when disposed in the hollow internal channel to engage distal ends of the locking fingers and retain the pin against proximal movement.

Regarding claim 38, Clark et al. disclose the hollow internal channel and the pin extend distally beyond the engagement between the locking fingers and the pin, to define a relatively long, restricted space between the pin and the hollow internal channel that restricts access to the fingers.

Regarding claims 4, 9 and 19, Clark et al. in view of Clark disclose the invention substantially as claimed, but do not disclose the housing and the locking finger comprising a fiber-reinforced nylon material nor the pin comprising a brass material. It

would have been obvious to one having ordinary skill in the art at the time the invention was made to chose a fiber-reinforced nylon material for the housing and locking finger and brass for the pin, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin,* 125 USPQ 416.

Claims 5 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. in view of Clark, as applied to the claims above, further in view of Eifler (US 4,406,507).

Regarding claims 5 and 20, Clark et al. in view of Clark disclose the invention substantially as claimed, but do not disclose eight locking fingers evenly spaced around the hollow internal channel. Eifler teaches six fingers, and discloses, "more or less than the number of fingers **14** as shown may be used" (column 3, lines 26-27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the housing of Clark et al. with eight, evenly spaced, locking fingers as Eifler teaches to center the pin with respect to the channel.

Claims 8, 10-12, 15, 16, 21 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. in view Clark as applied to the claims above, further in view of Applicant's Admitted Prior Art ("A.A.P.A.").

Regarding claims 8, 10 and 21, Clark et al. in view of Clark disclose the invention substantially as claimed, but do not disclose the pin being a gas carrying pin. A.A.P.A.

teaches a pin for carrying gas for use in a plasma arc apparatus. It would have been obvious to one having ordinary skill in the art to modify the pin of Clark et al. with a gas carrying pin as A.A.P.A. teaches to enable the pin to carry fluid and permit use with a plasma arc apparatus.

Regarding claim 11, Clark et al. disclose the locking fingers are integrally formed within the hollow internal channel.

Regarding claim 15, Clark et al. disclose the pin is recessed within a second portion of the hollow internal channel.

Regarding claim 24, Clark et al. disclose the negative lead gas carrying pin is recessed within a second portion of the hollow internal channel.

Regarding claims 12, 16, 25 and 26, Clark et al. in view of A.A.P.A. disclose the invention substantially as claimed, but do not disclose the housing and the locking finger comprising a fiber-reinforced nylon material nor the pin comprising a brass material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to chose a fiber-reinforced nylon material for the housing and locking finger and brass for the pin, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin,* 125 USPQ 416.

Claims 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. in view of Clark in view of A.A.P.A. as applied to the claims above, and further in view of Eifler.

Regarding claims 13 and 22, Clark et al. in view of Clark in view of A.A.P.A. disclose the invention substantially as claimed, but do not disclose eight locking fingers evenly spaced around the hollow internal channel. Eifler teaches six fingers, and discloses, "more or less than the number of fingers **14** as shown may be used" (column 3, lines 26-27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the housing of Clark et al. as modified by A.A.P.A. with eight, evenly spaced, locking fingers as Eifler teaches to center the pin with respect to the channel.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann M McCamey whose telephone number is (703) 305-3422. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AMM
March 28, 2003

RENEE LUEBKE
PRIMARY EXAMINER